



Starr WSC

1031 Cleve Cole Rd. Denison TX, 75021

Comprehensive Plan and Standard Specifications

EFFECTIVE DATE: March 30, 2023

Definitions of acronyms used in this document:

ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
TCOG	Texas Council of Governments
TCEQ	Texas Commission on Environmental Quality
PSI	Pounds per Square Inch
TX-DOT	Texas Department of Transportation
ROW	Right of Way

Introduction

The following requirements are hereby established as the standard for the Starr Water Supply Corporation and are to be used in conjunction with the Standard Specifications for Public Works Construction as released by TCOG, AWWA specifications, and requirements of the TCEQ as applicable.

General Requirements

No utility construction shall begin until a set of engineered drawings of the proposed construction, stamped by a Texas licensed engineer, is received by the Starr Water Supply Corporation and approved by signature of the President of the Board of Directors or his designee. A notice of at least 48 hours must be provided to the Corporation prior to beginning any construction,

- All utility construction shall be performed in accordance with specifications listed herein and shall be inspected and documented by the Starr Water Supply Corporation. Inspections will require any water installation to meet the highest standard applicable to preserve the integrity of Starr's water supply.
- The contractor or owner will be responsible for replacement of any Starr Water Supply Corporation property damaged during construction, including, but not limited to, facilities, appurtenances, lines, valves, fire hydrants, etc.
- An emergency contact with telephone number must be on file prior to beginning construction.

General Construction Requirements

- All main utility lines must have a minimum cover of 36 inches.
- All utility lines and appurtenances must be inspected and approved by the Corporation prior to back filling or covering.

Water Main Design

- Water main construction must in all ways meet AWWA minimum design standards.



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- The developer shall submit a letter certifying and sealed by a Professional Engineer licensed by the State of Texas that the system has been designed in accordance with the requirements of this section and conform with the rules, regulations, and requirements established by the TCEQ Design Criteria in the Texas Administrative Code, as amended.
- All water meter boxes/vaults and valve boxes must be at finished grade, and visible at the time the job is completed.

Minimum Size & Material

- The minimum acceptable water pipe size for public utilities shall be six (6) inches, unless prior agreement is made with Starr Water; larger sizes may be required by Starr Water as a result of the plan review process.
- The minimum acceptable water pipe material for service lines 2" or larger shall Class 200 or C900 if required by City of Sherman ETJ.
- The minimum acceptable water pipe material for any service line one (1) inches or smaller shall be polyethylene

Joints

- All water main fittings must be ductile iron.
- All joints shall be flange or mechanical.
- All mechanical joints must use Mega Lugs.
- No glue type joints are allowed on any line.
- All fittings subject to surge or pressure must be blocked with $\frac{1}{3}$ yard, or more, of 5 sack concrete. When using concrete for restraint, all nut and bolt assemblies shall be protected with a high-density plastic wrap.

Bedding

- All water lines must be bedded with sand at depths of six (6) inches below the pipe and six (6) inches above the pipe, unless requirement is waived during installation by Starr Water.

Valves

- All valves shall be installed so that the valve box lid and pad will be at finished grade, including sod.
- Valves nuts shall be located in the center of the box
- All valve boxes shall have a 18" x 18" concrete pad around the lid at finished grade The valve lid and pad shall be at the same elevation
- Valves shall be located at the intersection of two or more main lines.

Tie-in

All tie ins to existing lines shall be done by the contractor/developer. Starr water must be notified with sufficient time to be present during the tie in process, and must be present until the tie in is complete.

Pressure Testing

- All water lines shall pass the appropriate pressure test of 150 PSI for 4 hours.

Fire Hydrants

- All fire hydrants that are installed as public utilities or private owned shall be:
 - ✓ improved style of Mueller or clow type hydrants with 5 ½ inch barrels
 - ✓ 3 way hydrants with one 4.5 " steamer and two 2.5" outlets; outlets shall have national standard thread
 - ✓ installed so that the center nut of the steamer cap is located at 18" above the final grade
 - ✓ installed so that the breakaway flange is located at final grade
 - ✓ installed with a valve restrained between the hydrant and the main line

- ✓ anchored using Grade Lok or other approved swivel type anchor
- ✓ set with the steamer of the hydrant facing the street or fire lane
- ✓ Rounded rock 1" to 2" in size must be used as backfill up to 12" above the foot of the hydrant.
- ✓ Fire Hydrants will be used at the end of dead-end mains and cul-de-sacs



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Bacteriological Sampling

- Bacteriological sampling in accordance with the Rules and Regulations of TCEQ must be completed prior to a line being placed into service
- All sampling shall be at the expense of the contractor who will be billed prior to sampling
- Accessible sampling points shall be prepared by the contractor at points designated by the Corporation
- All sampling shall be conducted by the Starr Water Supply Corporation however the contractor should have staff on site for the opening and closing of line valves and other duties as required
- Water lines that pass all tests shall be put into service at that time
- After the acceptance of the main utility lines and public fire hydrants, the Fire Department will flow test and color code the hydrants based on flow characteristics.

Water Meters

All water meters will be furnished and installed by Starr Water Supply

Method of Meter and Meter Box Installation

- All water meters must be installed in public right-of-ways.
- All water meters 1" or smaller shall be installed in 18" x 14" plastic meter boxes.
- All water meters larger than 1" and smaller than 2" shall be installed in 24" x 18" plastic meter boxes with lids.
- All meter boxes shall be installed so that the top of the box will be at final grade including sod.
- Curb stops shall be set six (6) inches below finished grade.
- A meter spud shall be used on all 3/4" and 1" meter installations.
- Meters and/or meter boxes are not to be re-located without permission from the Starr Water Supply Corporation.

Tapping Requirements

- Tapping saddles must be used for all taps. All taps must use a brass tapping saddle.
- Corporation stops must be brass.
- Taps shall be separated by at least 18" and be placed no closer than 24" to the end of a pipe section.
- 3/4" or larger poly tubing must be used between the corporation and the curb stop.
- Service lines under pavement shall be placed in encasement pipe.
- Tapping sleeves for taps larger than 2" shall be all stainless
- No size-on-size taps are allowed without the written consent of the Starr Water Supply Corporation.
- Starr Water personnel shall determine how any and all connections to existing water lines are to be accomplished.
- All taps and connections must be inspected by Starr Water Supply Corporation personnel.

Disinfection.

- Tabular calcium hypochlorite is the required method of disinfection for new water mains.